



DIOX-C CHLORINE DIOXIDE GENERATOR

WALLACE & TIERNAN® PROCESS TECHNOLOGY

The DIOX-C generator is the synonym of reliability in chlorine dioxide technology combining high process efficiency with safe operation, durability and low maintenance. Chlorine dioxide is produced as an aqueous solution of stable strength up to 4500 g/h. For the generation, sodium chlorite (24.5% NaClO₂) and Chlorine gas (Cl₂) are used.

Principle of operation

The DIOX-C chlorine dioxide generator is extremely economical in the production of an aqueous chlorine dioxide solution. Chlorine gas, the feed rate of which is set at the remote vacuum chlorinator, mixes with the operating water to form a solution which is then fed to a reaction tank. Once the chemicals have fully reacted, the concentrated chlorine dioxide solution is diluted. The quantity of the dilution water is adjusted to give the required strength of the chlorine dioxide. This can be set from 1 up to max. 3 g/l ClO₂ depending on the demand. During the filling process the gas produced in the chlorine dioxide storage tank is aspirated by an injector. During off periods, degassing is prevented by an absorber unit. The monitoring functions of the system guarantee the mixing ratio of chlorine gas and sodium chlorite and thereby the virtually full conversion of chlorite to chlorine dioxide.

Installation and maintenance

The chlorine dioxide generator is supplied completely preassembled and tested. On site only operating water and chlorine cylinders have to be connected and an electricity supply to be provided. Dosing equipment is supplied as separate items. In accordance with local safety regulations tests have to be carried out by trained, authorised personnel familiar with the units prior to commissioning and afterwards at regular periods. Test, expert installation and commissioning as well as regular maintenance are available from Wallace & Tiernan® system specialists.

Key Benefits:

- Highest conversion efficiency for the generation of chlorine dioxide
- High stability of the chlorine dioxide solution prepared
- Batch system suitable for multiple points of application
- Compact footprint for easy installation
- Extensive connections possible (PROFIBUS® DP, PROFINET IO)

TECHNICAL DATA

Reaction tank: 67 l

Storage tank for chlorine dioxide solution: 150 l

Power supply:

1/N/PE AC 230 V, 50 Hz max. 16 A/max. 500 VA without booster pump

3/N/PE AC 400/230 V, 50 Hz fuse and power consumption depend on the booster pump

Power consumption:

max. 500 VA (without booster pump)

Fuse: max. 16 A

Weight: 235 kg empty, 520 kg full

PROFESSIONAL CONTROL

PLC: SIMATIC S7/CPU 314

Control desk: 7 " touch panel

Connections (optional): PROFIBUS® DP, PROFINET IO

Functions:

- Continuous monitoring of chemical flow
- Automatic flow adjustment after entering the requested strength into the touch panel
- Cl₂+ClO₂ mode (mixed mode) adjustable

Maximum capacities of generator	1500 g/h ClO ₂	3000 g/h ClO ₂	4500 g/h ClO ₂
Remote vacuum chlorinator (Cl ₂)	1059 g/h	2117 g/h	3176 g/h
Diaphragm metering pump Chem-Ad® Series B for sodium chlorite NaClO ₂	6.7 l/h	13.4 l/h	20.1 l/h
Rotameter with adjustable min. and max. contacts			
Injector operating water	400 l/h	1000 l/h	1500 l/h
Dilution water	1000 l/h	1500 l/h	2000 l/h

A separate Data Sheet is available.